**THEANO PACKAGE INSTALLATION**

**Author:** Kai-Tao Yang (k.t.yang@uvt.nl) and Pradeep Kumar (p.kumar@uvt.nl)

Please open the command window as administrator and run the following two commands:

**Step 1:** conda install theano

**Step 2:** conda install mingw libpython

**Testing code:**

Please run the following code in the **Jupyter notebook** to check if the Theano package is properly working or not.

import numpy as np

import time

import theano

A = np.random.rand(1000,10000).astype(theano.config.floatX)

B = np.random.rand(10000,1000).astype(theano.config.floatX)

np\_start = time.time()

AB = A.dot(B)

np\_end = time.time()

X,Y = theano.tensor.matrices('XY')

mf = theano.function([X,Y],X.dot(Y))

t\_start = time.time()

tAB = mf(A,B)

t\_end = time.time()

print("NP time: %f[s], theano time: %f[s] (times should be close when run on CPU!)" %(

                                           np\_end-np\_start, t\_end-t\_start))

print("Result difference: %f" % (np.abs(AB-tAB).max(), ))